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DREF operation update
Madagascar: Plague outbreak

International Federation of Red Cross and Red Crescent Societies

DREF operation n° MDRMG010
GLIDE n° EP-2013-000156-MDG
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The International Federation of Red Cross and Red Crescent (IFRC) Disaster Relief Emergency Fund (DREF) is a source of un-earmarked money created by the Federation in 1985 to ensure that immediate financial support is available for Red Cross and Red Crescent emergency response. The DREF is a vital part of the International Federation's disaster response system and increases the ability of National Societies to respond to disasters.

Period covered by this update: 17 December 2013 to 31 March 2014.

Summary: CHF 137,131 was allocated from the IFRC's Disaster Relief Emergency Fund (DREF) on 14 January, 2014, to support the Malagasy Red Cross (MRCS) in delivering assistance to up to 33,125 beneficiaries in the district of Tsiroanomandidy, Manjakandriana, Mandritsara, Soanierana Ivongo and Ikongo. A few weeks into the operation, when the National Society had completed identifying volunteers for training and deployment during the response operation implementation as well as having finalised the analysis of data collected, MRCS received a letter from the Ministry of Health proposing new intervention areas. These areas include, Miarinarivo (Region of Vakinankaratra), Ambadofinandrahana and Manandriana (Region of Amoron`I Mania), Faratsiho (Region of Vakinankaratra), Ankazobe (Region of Analamanga) and Tsiroanomandidy (Region of Bongolava).This delayed the implementation of activities, and as a result of this, this operation update seeks to extend the operation timeframe for six weeks (up to 30 June 2014) to allow for a review to take place and finalize revised activities. A final report will be made available three months after end of the operation, by 30 September 2014.

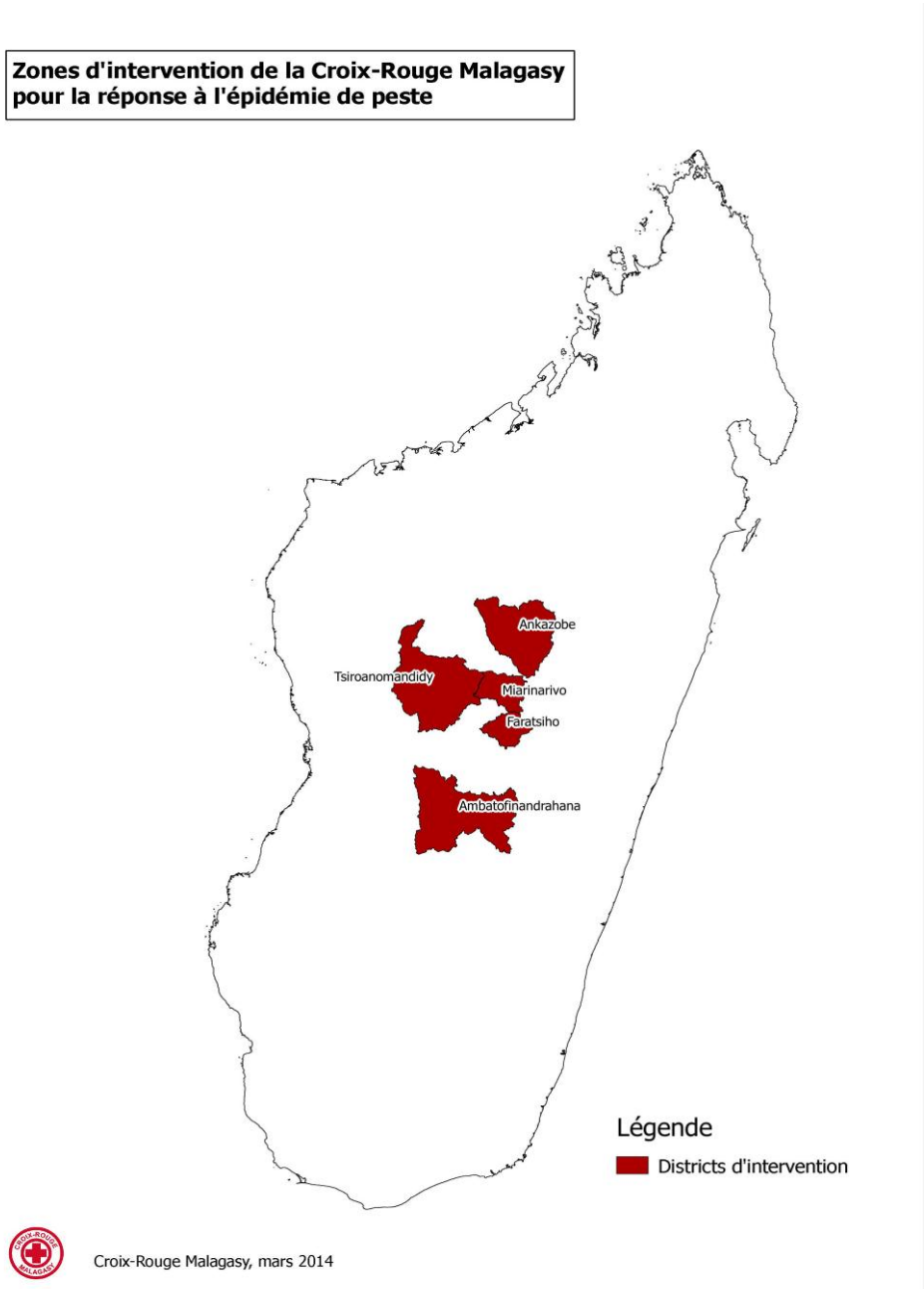
Malagasy Red Cross volunteers conducting community awareness to beneficiaries at their workplace. Photo/MRCS

The situation

Since the beginning of 2013 until mid-January 2014, there have been 660 reported cases of the plague, of which 27.6 percent have been confirmed. Of these cases, 463 (166 confirmed) were recorded as the bubonic form of the disease, 187 (11 confirmed) as the pulmonary form, and 10 (5 confirmed) as pneumonic. Of the total reported cases during the period, 113 deaths (43 confirmed cases) have occurred. The prolonged political crisis has resulted in a deterioration of sanitation and housing conditions in cities and in highly vulnerable and underserved communities in the remote highland areas. Of the 22 regions that make up the country, 11 were affected by the outbreak: Analamanga, Vakinankarata, Bongolava, Itasy, Amoron' I Mania, Haute Mahatsiatra, Vatovavy, Analanjirofo, Boeny, Betsiboka, Sofia, Alaotra Mangora, Sava, and Diana. The disease has been confined to highland areas for the last 60 years, but is now also being transmitted at lower altitude, and poses a particular risk for people living in overcrowded and unsanitary conditions, where rat populations are particularly high and living in close contact with humans. Over 50 percent of the reported plague cases originate from the most populous areas (zones) around (and also within) the capital city. The cases originate from 34 districts, and within each district, only from certain villages. We estimate that 5 percent of the total population is harbouring the epidemic cases currently. These communities are generally those

living in unhygienic conditions, with chronic rat and flea infestations, as this represents the perfect environment for plague transmission. This makes the epidemic controllable through carefully targeted prevention campaigns. Without intervention, the risk of further spread of the epidemic to the poorest communities in these urban areas, and also in prisons (as identified already by ICRC) is extremely high, and would result in an explosive situation that could result in thousands of plague cases as in 1996-98.

Figure 1:Intervention zones targeted by MRCS



On 18 February the Ministry of Health sent an official request to MRCS to revise it's planned areas of interventions, and to focus on the following new areas: Miarinarivo (Region of Vakinankaratra), Ambadofinandrahana and Manandriana (Region of Amoron`I Mania), Faratsiho (Region of Vakinankaratra), Ankazobe (Region of Analamanga) and Tsiroanomandidy (Region of Bongolava)

Table 1:Summary of the cases

District Public Health	Suspect cases		Bubonic plague		Pneumatic plague		Non-precise		Deaths	
	registered	confirmed	registered	confirmed	registered	confirmed	registered	confirmed	reported	confirmed
Analamanga										
SDSP Ankazobe	48	31	46	29	0	0	2	2	9	6
Vakinankaratra										
SDSP Faratsiho	44	10	23	8	21	2	0	0	2	2
Itasy										
SDSP Miarinarivo	31	7	24	6	5	1	2	0	8	3
Amoron' i mania										
SDSP Ambatofinandrahana	49	15	40	14	9	1	0	0	0	0
Bongolava										
SDSP Tsiroanomandidy	42	23	42	23	0	0	0	0	7	6
TOTAL	**214**	**86**	**175**	**80**	**35**	**4**	**4**	**2**	**26**	**17**

Source : “Division Peste du Service de la Lutte contre les Maladies Epidémiques et Négligées”

Coordination and partnerships

The Ministry of Health (MoH) with the support of the National Bureau of Risk Management and Disaster are the authorities primarily responsible for Public Health in Madagascar. They are a partner of MRCS and provide their expertise in the health cluster including WHO. This plague outbreak has been managed by the MoH since the first case was reported. The response has so far only been focused on treatment of cases and protection of people who care for and are in close contact with confirmed pneumonic plague cases.

Before the political crisis, the activities of management and sensitization carried out by village mobilizers and supported by the MoH were sufficient to limit the cases of plague and cases of pneumonic plague happened only rarely. However, after the political crisis, rat and flea control activities have not been delivered in the epidemic areas due to lack of funding.

The MoH divisions for plague and communication are providing a good basic forum for coordinating the main stakeholders involved in plague control. MRCS is playing an active role within the national co-ordination structure for plague, and is a respected partner. Within this current plague coordination structure UNICEF is taking the lead together with MoH to conduct surveys of community understanding, and behaviour in relation to plague, in all of the 11 affected zones. The results of those surveys are expected to be used by UNICEF and MoH, Pasteur Institute, MRCS and others, to develop a package of standardized education messages for each zone, tailored to the needs identified through the surveys in each zone. These messages, expected by mid- March, will then be translated into a series of posters and radio spots. However, meetings with officials of the Ministry of Health, WHO, UNICEF and Pasteur Institute (24-29 Jan 2014) have revealed that none of these partners have any significant funding available for plague control. UNICEF has the largest budget, But just USD 40,000, of which all have been used to support the MoH to evaluate community perceptions and support development of new IEC materials.

There is currently very limited capacity amongst the partners to pay for the dissemination of the IEC materials currently under design, UNICEF will provide IEC messages to 65 radio stations, and will provide a workshop to orientate journalists in the use of the messages. However, the radio stations will not be paid by UNICEF or MOH to deliver the messages. The outcome of this approach is therefore anticipated to be partial and short term, over a few weeks only.

None of the existing partners have funds to purchase the essential commodities needed for flea and rat control, nor to operationalize the control programmes at scale in the affected communities. WHO is currently

hoping to raise some funds for future support to the plague response and has shared its proposal with MRCS. However, the proposal is not yet submitted to donors and funding is likely to be slow and insufficient. It may contribute to future flea and rat control commodities but no funds are expected to be available to the urgent epidemic control activities currently needed over the next three months.

.MoH (supported by WHO) are focusing on all current resources on disease surveillance of plague cases, and provision of antibiotic supplies to health facilities, to reinforce treatment capacity. Pasteur Institute is advising the MoH on which tools are the most efficient to use, and has identified the tools and approaches, of which MRCS has taken on board and focused on within this DREF.

As a result of the above coordination between all the key stakeholders a very urgent and as yet, completely unmet need has been clearly identified and quantified, namely to activate targeted plague prevention programs at community level in each of the most affected villages, in order to cut transmission of this devastating disease.

Red Cross and Red Crescent action

Through the joint support of the IFRC HQ and East Africa Regional team, together with the MENTOR Initiative, the MRCS has developed an appropriate and effective emergency epidemic prevention programme designed to provide targeted protection from plague infection for the most vulnerable communities in each of the districts affected by the current epidemic of Bubonic and Pneumonic Plague.

The regional office of the IFRC in East Africa and the Indian Oceans, Nairobi and French Red Cross' Regional Platform in The Indian Ocean Islands (PIROI) support MRCS and will ensure technical and management support as required to assist the MRCS in delivering the emergency programme activities, maximise benefit to the affected communities, and ensure monitoring and evaluation of the DREF impact.

At the end of the IFRC's consultant mission in Madagascar, an intervention planning for 34 districts was developed, with additional activities in relation to the approved DREF. In the lack of clear communication, the MRCS has continued to prepare interventions in 34 districts, with different activities until 18 February. The MRCS decided to react after receiving a letter from the Ministry of Health about the new proposal of intervention areas: That is Miarinarivo (Region of Vakinankaratra), Ambadofinandrahana and Manandriana (Region of Amoron`I Mania), Faratsiho (Region of Vakinankaratra), Ankazobe (Region of Analamanga) and Tsiroanomandidy (Region of Bongolava) after an analysis of data. MRCS decided in consultation with the IFRC on site to use the approved DREF. MoH's proposed revision of target areas were based on the following criteria:

- existing heavy cases of plague and subsequent deaths,
- 20 to 60% of suspected cases are confirmed,
- Adequate context of epidemiologic data,
- lack of health structures and increased risk,
- Cases of plague in Sonierana Ivongo was transmitted from Mandritsara,
- no cases reported from Mandritsara and Ikongo after assessments missions conducted by Ministry of Health on November and December 2013 (reported in January)
- In Manjakandriana, out of six suspect cases, one case only is confirmed as plague

Malagasy Red Cross will implement the project in 5 districts proposed by the Ministry of Health: Miarinarivo,(Region of Itasy), Ambatofinandrahana (Region of Amoron`i Mania), Faratsiho (Region of vakinankaratra), Ankazobe (region of Analamanga), Tsiroanomandidy (Region of Bongolava) in 60 Fokontany. The number of targeted people for sensitization is estimated at 128,688.

All DREF activities will be focused exclusively in villages that are directly affected by plague, within the 5 recommended districts. Plague affects men and women of all ages equally, and all are at risk

of disease and death. Therefore the programme has been designed to provide equal protection for all sectors of affected communities.

Progress towards outcomes

Emergency Health and Care

Outcome 1: Reduced morbidity and mortality among approximately 30,000 people (6,625 families) through health promotion and disinfection activities, supporting early case detection and community case management in five districts	
Outputs :	**Activities planned:**
• The Red Cross volunteers have the necessary capacity to respond to the plague outbreak as well as prevent further outbreaks. • Up to 6,625 families have increased their knowledge on proper health practices necessary to prevent further spread of the plague in their communities.	• Continuous assessment and reporting of the evolving situation and spread of disease • Organize training on plague outbreak management with the support of IFRC-contracted external technical support • IEC/BCC materials (posters, flyers) on plague and ways to control its risk produced, printed and distributed to enhance positive behaviour change • Produce 225 protective and visibility gear • Train volunteers on health promotion messages to be disseminated • Deploy volunteers to identify high risk areas • Disseminate key plague prevention messages to communities using beneficiary communication tools sus as public gatherings, home visits, radio and television spots • Conduct a lesson learnt workshop on the plague outbreak • Refer suspected cases to closest available health facilities for treatment • Monitor and report on activities water

Progress:MRCS is working with UNICEF and the MoH on the development of new IEC messages, guided by results from community based surveys. This will include the design of four new posters that will be used at community level by MRCS. The four subjects covered will be:

- Transmission of Bubonic Plague (rat – flea – human) and correct treatment
- Transmission of Pneumonic Plague and risk behaviours (human to human) – and correct treatment seeking
- Methods for reducing and controlling fleas
- Methods for reducing rats entry into homes, safe trapping and disposal

All stakeholders will standardize on the use of the plague education messages that are disseminated through the epidemic response period and thereafter.

RC Volunteers work with community leaders to conduct active suspected case finding in the communities they serve.

There can be stigma associated with a family member having plague, and sufferers of rat borne/flea transmitted bubonic plague, and family relations sometimes prefer to avoid plague diagnosis, seeking local healers for cures to other perceived conditions etc. and only seeking proper health care in more distant facilities, when the disease has been left untreated it can deteriorate into the much more dangerous septicemia or pneumonic forms, by which stage the risk of death escalates. Equally, in some of the more remote areas, communities believe that plague is the result of evil spirits and not a medical disease that can be treated. This again delays people who first seek the intervention of local healers. The RC volunteers will work with community and health authorities to visit suspected plague cases in their community to try and

actively locate and report potential cases (as requested by the MoH) and will to the extent possible, assist suspected cases to reach the nearest health facility.

Dissemination of standardized plague education messages through media:MRCS will work with the UNICEF communications team to identify 65 radio stations that have the greatest network coverage in plague affected areas, and MRC will then contract these stations to disseminate radio spots developed (by UNICEF communications team) daily through February – April. Radio station stations will be selected on the basis of their geographic broadcasting coverage, and ability to provide messages in local dialect, as appropriate. Major activities implemented include:

- A meeting was organized by MRCS in the Ministry of Health during the month of January to analyze the communications tools already existing to fight plague in Madagascar. Harmonization of the activities and a joint calendar were decided between Ministry of Health, Pasteur Institute, UNICEF and MRCS for the communication tools update.
- Two posters were updated and validated, and ready to be used by MRCS as of 31 January 2014.
- MRCS participated in the contingency planning to fight against plague in urban areas and sharing activities to be done between partners and practice exchanges on 13-14 February 2014 at the Pasteur Institute
- The meeting for the preparation of different trainings for volunteers was held in Antananarivo from 25 to 27 February 2014 as planned.
- The health department of Malagasy Red Cross organized a meeting with the responsible people for the targeted zones with the intervention of the chief of “Plague division” to define the modules of training of trainers and the training of volunteers. The terms of references for different actors were shared and discussed.
- 5 regional concerned coordinators will do a mission in the concerned “Fokontany” – the places were the plaque outbreaks have occurred and their surroundings - to mobilize the volunteers according to the terms of references. The preparation for those missions is in progress. The didactic tools in national language for the training of trainers are already produced. The facilitators in the field will be composed by 1 regional coordinator and 2 coaches.
- In Miarinarivo district, MRCs volunteers started to sensitize their community after a working session of local partners using minimal message validated by local sanitary authority.
- IEC/BCC materials (posters, flyers) on plague and ways to control its risk were printed: The radio and TV spots included the validated messages by Ministry of Health, which were developed and ready to be published in the local media.
- The radio shows were prepared by the Malagasy Red Cross local branches in collaboration with the local sanitary authorities, the contract of diffusion between the Regional Coordinators and the local private radio stations is under preparation.
- All activities of Malagasy Red Cross were diffused in the national radio channel due to the collaboration between the branches and the public local stations.
- The monitoring and evaluation missions on health and care activities were conducted.
- The operation is being extended for six weeks to enable remaining activities to be completed and for a review and lessons learnt to be conducted at the end of the operation timeframe.

Water, sanitation, and hygiene promotion

Outcome: The immediate risks to the health of among approximately 30,000 people (6,625 families) through hygiene promotion and vector control activities in five affected districts is reduced.	
Outputs	**Activities Planned:**
• Up to 6,625 families have increased their knowledge on proper hygiene and sanitation practices necessary to prevent further spread of the plague in their communities.	• Orient 225 volunteers on hygiene promotion and vector control activities • Conduct house to house visits for hygiene promotion and sanitation • Engage vector control specialist (focus and plague) for assessment and training • Deploy volunteers to identify high risk areas

	• Disseminate key plague prevention messages to communities using beneficiary communication tools such as public gatherings, home visits, radio and television spots • Volunteers to guide heads of households and communities in rehabilitating their homes to prevent rats by blocking all holes • Volunteers to train heads of households and communities in hygiene promotion and environmental sanitation including garbage removal and the fight against the plague • Procure and distribute protective gear for volunteers involved in vector control activities • Monitor and report on activities

Progress: Dissemination of standardized plague education messages through MRC volunteers at community level.

MRCS zonal co-ordinators were trained in plague IEC, and are conducting trainings for the volunteers in their areas, and will be responsible for supplying them with the IEC materials produced by MRCS. A total of 225 MRCS community based volunteers will be trained and mobilized to deliver the posters to every village in their allocated areas, and to reinforce these messages with oral delivery and discussion in their communities. In each of the 5 districts targeted in this epidemic response, 45 per district will be identified, trained and equipped with enough sets (a set = one of each of the four posters) to install these in every village, and to provide them to health centres and other public service buildings as appropriate. They will have to:

- Educate families on household risk environments that encourage flea infestations
- Educate families on how to improve household and personal cleanliness in order to reduce fleas
- To visit 95 percent of the households to transfer the awareness messages to fight against plague.
- To identify 100 percent of suspected diseases and oriented to hygiene promotion and environmental sanitation.
- To teach the population how to capture maximum rats and how to treat the carcasses.

Sensitization of the population on how to rat proof their homes, safe rat trapping and disposal: If uncontrolled, as many as 50 rats may enter a house each night in poor unsanitary communities. Households can reduce rat entry by making practical improvements to their homes, blocking up holes in walls, doorways, windows, keep the house clean, and keeping all food in containers with tight lids. In the currently worst affected areas the rat infestation is already well established and households will be poor and have limited capacity to improve their homes. In endemic areas large numbers of rodents mean correspondingly large numbers of fleas. As the peak passes and the rodents die, the danger lies in the huge flea populations, many possibly infected. It should be remembered that there are more fleas on the ground and in burrows than on the rodents, as the female fleas leave the host after a blood meal to lay their eggs.The prevention teams will have very close contact with families through the nature of their prevention activities, and will advise families on how to reduce rat entry into their homes, this will include:

- Filling of cracks and holes in walls.
- Blocking of holes and gaps in doorways and windows.
- Blocking of holes around drainage pipes other entry point to the underside or inside of the house or roof space.
- Safe and sealed storage of food and other attractants of rats in the household.
- Block burrows.

Where families are already undertaking their own rat trapping, or plan to, the prevention volunteer will educate them how to set the traps, and how to safely remove and dispose of the rats. Each of 60 fokontany will be equipped with 20 rat traps, gloves, and sacks which they will treat with fenitrithion dusting powder. Rat numbers caught will be recorded and monitored by the district coordinator. In addition to the known means of sensitization, protection of house by aluminum foil, the ministry of health and Institute Pasteur strategies are

to eradicate the rats by disinfestation, followed by capture and the elimination of the dead rats by burning and burial.

Following the meeting for training preparation held in Antananarivo last February, the field missions by the regional coordinators in the target villages finalized a list of volunteers ready to be mobilized in the communities to work during the duration of the project. There were 216 volunteers (instead of 225 initialled planned). The training of trainers in the 5 districts was held in the capital during 5 days as decided during the meeting instead of 3 days as initially planned. The new trainers supported by experienced trainers of the Malagasy Red Cross branches worked in the sanitary services in the districts and trained the mobilized volunteers in each head of district level. The 216 volunteers have now returned to the villages, they are introduced through courtesy visits to the local authorities by Regional Coordinators and trainers. The WatSan materials and rat trap, box of Carman and bags are on the way to the target villages. The transport to the non-accessible areas is organized by the communities.

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